

### **REMARKS**

The Patent Office issued an Office Action on April 12, 2007, to which this amendment is responsive. However, Applicants note that there was an earlier Final Office Action, issued on January 5, 2007, to which a response was filed on March 9, 2007. By issuing a new, non-final Office Action, it is believed that the Patent Office intended to withdraw the finality of the Office Action of January 5, 2007, and Applicants respectfully request confirmation of the same.

Applicants' representative thanks the Examiner for a teleconference on June 27, 2007, in which the objection to the drawings in the Office Action of April 12, 2007 was clarified with respect to the claims. It is believed that the amendments to the claims are responsive to this objection, as is discussed below. Thus, the present response is believed to constitute a complete written statement of the reasons presented in the interview as warranting favorable action, as required by 37 C.F.R. §1.133.

Independent claims 163, 164, 166, and 167 have each been amended to recite "a small-scale chemical or biochemical reactor comprising a plastic substrate comprising at least one reaction unit, the reactor comprising an inlet, an outlet, and a fluid pathway connecting the inlet and the outlet." It is believed that these amendments serve to clarify the claims. Thus, no new matter has been added. In addition, in these claims, the phrase "constructed to operate in parallel" has been deleted. It is not seen where the prior art discloses or suggests the subject matter of independent claims 163, 164, 166, and 167, as amended.

### **Drawings**

Applicants note that the drawings, as currently pending, illustrate various reactors and reactor systems. For instance, Fig. 1 shows a system 10 including a reaction unit 16. The claims have been amended to delete the phrase "constructed to operate in parallel"; thus, it is believed that the objection to the drawings on this ground is now moot, although the properness of this objection is not conceded to by the Applicants.

With respect to the sensors, the sensors can be positioned anywhere within the reaction system, for example, as is discussed on page 6, lines 24-26. One of ordinary skill in the art would understand that a sensor can be positioned anywhere within a system of the invention. In addition,

the nature of the position of the sensor (i.e., the sensor is positioned anywhere within the reaction system) can be readily understood without needing an illustration in a drawing. Accordingly, it is believed that drawings are not necessary for understanding that a system such as that shown in Fig. 1 may further include a sensor positioned in any location, and that the requirements of 35 U.S.C. §112, ¶1 and ¶2 (relating to written description, enablement, and best mode) and §113 (relating to drawings) are met.

Thus, for at least these reasons, it is respectfully requested that the objection of the drawings be withdrawn.

Rejections under 35 U.S.C. §112, ¶2

Claims 157-199 have been rejected under 35 U.S.C. §112, ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, for the reasons stated in the Office Action.

Applicants thank the Examiner for the clarification. Applicants have rewritten independent claims 163, 164, 166, and 167, as discussed above. It is believed that these amendments address the concerns of the Patent Office. The remaining claims each depend, directly or indirectly, on independent claims 163, 164, 166, or 167.

Applicants note that in embodiments provided in the specification for purposes of example only (see Figure 1), a *reactor* (generically described as such throughout the specification, exemplified as system 10 in Figure 1) can include a *reaction unit* 16 (along with mixing unit 12, heating/dispersion unit 14, and separation unit 18). It is suspected that one basis of the rejection on this ground was the incorrect assumption that each of units 12, 14, and 18 is a *reaction unit*. As noted by the Examiner, the specification also supports the assembly and disassembly of units such as these in various configurations (see, e.g., page 12, lines 21-23), and each such configuration will result in a *reactor* having an inlet and outlet, as is claimed.

Accordingly, it is respectfully requested that the rejection of claims 157-173 and 175-199 be withdrawn (claims 174 and 175 were previously cancelled in a Response filed March 9, 2007).


**CONCLUSION**

In view of the foregoing, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this response, that the application is not in condition for allowance, the Examiner is requested to call the undersigned at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge Deposit Account No. 23/2825, under Order No. B1102.70000US00 from which the undersigned is authorized to draw.

Dated: September 12, 2007

Respectfully submitted,

By   
Tani Chen, Sc.D.  
Registration No.: 52,728  
Timothy J. Oyer, Ph.D.  
Registration No.: 36,628  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, Massachusetts 02210-2206  
(617) 646-8000